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ECONOMIC INTELLIGENCE REPORT

THE CONSTRUCTION INDUSTRY OF EAST GERMANY 1945-60

CIA/RR 81
5 October 1956

CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

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(ORR Project 47.555)

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Chart

THE CONSTRUCTION INDUSTRY OF EAST GERMANY*
1945-60

Summary

Losses of construction labor to the armed forces during World War II and Soviet dismantling of equipment in 1945-46 severely limited the capacity of the East German construction industry in the early postwar years. The early construction effort was devoted mainly to clearing away rubble; restoring key roads, railroads, and communications systems; and rehabilitating specific industries that produced reparations goods for the USSR. Organized planning for new construction began in 1949 with the formation of a Ministry for Construction in the new central government of East Germany. The Two Year Plan (1949-50) provided for investments of 3.7 billion East German marks (DME), about half of which was allocated to industrial development. Construction accounted for about 75 percent of total investment in this period.

The First Five Year Plan (1951-55) announced planned capital investment, in construction and equipment, of DME 28.6 billion, over 50 percent of which was earmarked for investment in industry, particularly the metallurgical, machine building, and chemical industries. There is no evidence that the "new course," announced in 1953, resulted in any very significant change in this investment policy. The value of construction during the First Five Year Plan was about DME 17.2 billion. The planned program for industry probably was fulfilled, but the program for housing was fulfilled only about 90 percent and that for agriculture even less. During this period, military construction accounted for about 10 to 15 percent of total construction.

The basic causes for the underfulfillment of the construction program were bad planning, shortages of construction materials (particularly cement) and construction labor, and the poor condition

* The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 July 1956.

and inadequate inventory of construction equipment. These factors contributed to inefficiency of operations and low worker productivity, resulting in rising construction costs.

The Second Five Year Plan (1956-60) calls for a construction output of DME 26.4 billion. Shortages of labor and materials must be alleviated if the program is to succeed. The labor shortage can be compensated for only by raising productivity through the industrialization of construction, a "basic task of the construction industry" in the Second Five Year Plan. Adequate supplies of construction materials can be provided only by a substantial expansion of productive capacity, particularly for cement. In addition, construction equipment must be made available to support the industrialization program. In the past, domestically produced construction machinery and equipment largely have been exported to obtain needed industrial raw materials. East Germany will continue to be dependent on foreign sources for these raw materials. Furthermore, exports of cement and cement factories, principally by East Germany, figure prominently in the current Soviet Bloc policy of economic penetration of underdeveloped areas. It is doubtful, therefore, that supplies of materials and equipment will increase sufficiently to enable East Germany to meet the goals of its Second Five Year Plan in the construction sector of the economy.

I. Postwar Years, 1945-50.

At the end of World War II, economic revival in East Germany was left to the five Land (province) administrations subject to direct supervision by the Soviet Military Administration (Sowjetische Militaeradministration -- SMA). 1/* Twelve Central Administrations were formed to help SMA coordinate the work of the province administrations. 2/ In February 1948 the Central Administrations were merged into the German Economic Commission (Deutsche Wirtschaftskommission -- DWK), the new central government of East Germany. 3/ Construction became the responsibility of the Departments of Mining, Chemistry,

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Building, Wood, and Used Materials within the Administration for Industry of the DWK. In August 1949, construction responsibilities were transferred to the Main Administration for Construction, which in October 1949 became the Ministry for Construction in the new government of East Germany. 4/

The primary task of the construction industry in the early postwar years was to facilitate the utilization of existing productive capacity. Although industrial capacity in East Germany at the end of World War II was estimated to be at about the 1936 level, 5/ industrial production by the fourth quarter of 1946 had reached an annual rate of only 67 percent of 1936 production. 6/ Thus a considerable increase in production was possible without new capital investment for expansion of industrial capacity. In the early postwar years, construction effort was devoted mainly to clearing away rubble; restoring basic communal facilities; restoring key roads, railroads, and communications systems; and rehabilitating specific industries producing reparations goods for the USSR. 7/

The early postwar construction industry consisted of many small firms, in a structure ideally suited to performing the widely dispersed repair and restoration work. 8/ The capacity of the industry to complete the tasks of reconstruction, however, was limited both by a shortage of manpower and by Soviet dismantling of capital assets in the building and building materials industries. The construction industry was among the hardest hit by wartime manpower conscription until 1944, when the Allied air attack placed a heavy burden on the industry to maintain transport facilities and productive capacity. 9/ Moreover, the conscription of younger men for military duty during World War II left a disproportionately large number of older men in the construction labor force. During 1945-46, Soviet confiscation of excavation and erection machinery, bulldozers, trucks, and other construction equipment reduced the stock of equipment in the building industry to about 60 to 65 percent of the 1936 level. 10/ In the same period, Soviet dismantling of cement plants reduced the productive capacity of the cement industry to about 60 percent of the 1936 level. 11/

There was little growth in the value of output of construction until the adoption of the Two Year Plan (1949-50), which announced planned investments of DME 3.7 billion over the 2-year period. 12/ Industry received almost half of the total investment fund, with emphasis on development of the metallurgical, fuel, and chemical industries. 13/ The building of structures probably consumed at least

75 percent of total investment during this period. An index of construction during the Two Year Plan and the first 4 years of the First Five Year Plan (1951-55), with 1938 for comparison, is given in Table 1.

Table 1

Index of Construction in East Germany a/
1938 and 1948-54

1948 = 100

1938	1948	1949	1950	1951	1952	1953	1954
209	100	107	124	141	155	172	183

a. The index is based on figures for production of selected building materials. 14/

II. Position in the Economy.

Construction is one of the major industries in East Germany. In 1954, construction activities employed approximately 500,000 workers, or roughly 8.5 percent of the total labor force. 15/ This figure excludes an indeterminate number of convicts used in construction and voluntary labor contributed to cooperative housing and other local community projects.

Since World War II the construction sector of the economy has produced about 5.5 percent of the gross national product (GNP) of East Germany, a percentage which is expected to remain fairly constant. Construction in East Germany as a percentage of the GNP in 1948-54, with 1938 for comparison, is given in Table 2.*

According to the First Five Year Plan, construction (including the installation of equipment) was to account for 66 percent of capital investments over the 5-year period. The percentage of

* Table 2 follows on p. 5.

Table 2

Construction in East Germany
as a Percentage
of the Gross National Product a/
1938 and 1948-54

Year	Percent
1938	6.3
1948	5.5
1949	5.5
1950	5.3
1951	5.4
1952	5.4
1953	5.6
1954	5.6

a. 16/

capital investment allocated to construction was to decline consistently during the period (from 74 percent in 1951 to 61 percent in 1955) 17/ as the stock of buildings increased, and the percentage allocated to equipment was to increase consistently. Construction will account for a smaller percentage of capital investment during the Second Five Year Plan (1956-60) as increasing emphasis is placed on mechanization and modernization as means of achieving increased production.

III. Organization of the Construction Economy.

A. Planning and Supervision.

1. Division of Construction Responsibility.

Responsibilities for construction in East Germany are not merged under only one government ministry. In addition to the Ministry for Construction, at least five other ministries have construction responsibilities. The Ministry of the Interior is responsible for

most military construction; the Ministry for Machine Construction, for steel construction; the Ministry for Transport, for railroad, highway, and bridge construction; and the Ministry for Agriculture and Forestry, for some aspects of rural construction. The Ministry for Heavy Industry is responsible for construction in the coal industry and for such specialized industrial projects as furnace and smokestack construction. 18/ The Ministry for Construction is responsible for construction of dams and hydraulic installations, of certain technical installations for the coal industry, of excavation and underground construction, and of special projects in the field of dwelling house construction, as well as for coordination and control of large construction projects involving more than one ministry. The Ministry for Construction also exercises control over special projects of more importance than those of Bezirk* level. 19/

2. Construction Economy Plan.

The construction economy plan is composed of the construction plans of the various responsible ministries and the 14 Bezirke. Construction plan proposals are submitted by the ministries and Bezirke to the State Planning Commission, for incorporation into the State Planning Document. After approval of the State Planning Document by the Soviet authorities, the Central Committee of the East German Socialist Unity Party (Sozialistische Einheitspartei Deutschlands -- SED), and finally the Minister President, the State Planning Commission prepares the final Peoples Economy Plan. When the plan is made law by the Volkskammer (Peoples Chamber, or lower house), the State Planning Commission releases plan quotas and directives to the responsible agents. Funds made available by the Commission to implement the construction economy plan are intended to serve as control figures for the responsible ministries. 20/

B. Ministry for Construction.

1. Organization and Function.

The Ministry for Construction (the organization of the Ministry for Construction, 21/ is given in the accompanying chart**)

* A Bezirk is an administrative district similar to the United States Congressional District. East Germany is divided into the following 14 Bezirke: Cottbus, Dresden, Erfurt, Frankfurt an der Oder, Gera, Halle, Karl Marx Stadt, Leipzig, Neubrandenburg, Magdeburg, Potsdam, Rostock, Schwerin, and Suhl.

** Following p. 6.

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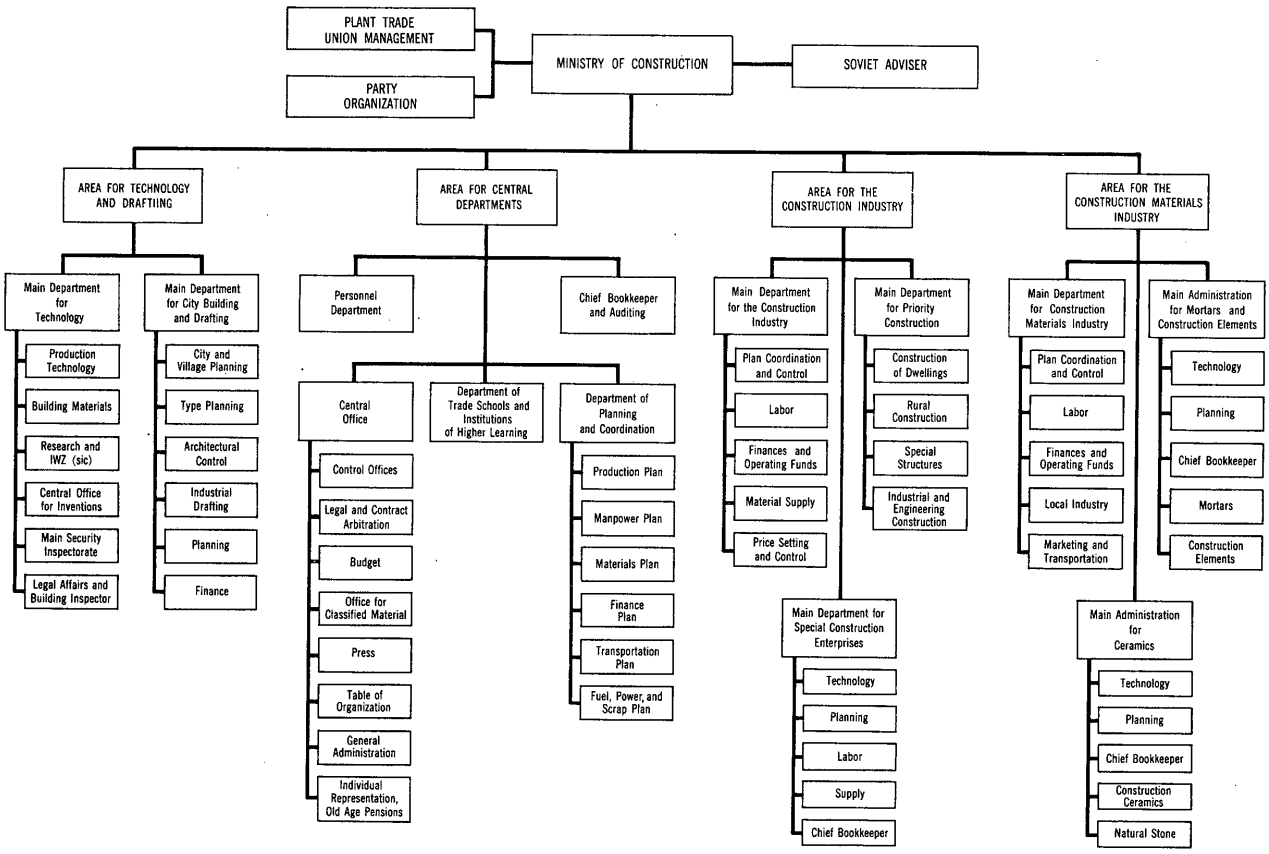
EAST GERMANY

ORGANIZATION OF THE MINISTRY FOR CONSTRUCTION



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is divided functionally into four major areas of responsibility, each directed by a deputy minister or state secretary. (a) The Area for Technology and Drafting is responsible for matters relating to the industrialization of construction, the development and introduction of new technology, technical and scientific cooperation with friendly nations, and construction standards. This Area also directs city and village planning and the development of architecture. (b) The Area for Central Departments coordinates and controls the execution of state projects for the Ministry, directs the training of technical and scientific personnel in the field of construction, and performs the general administrative functions of the Ministry. (c) The Area for the Construction Industry directs the construction enterprises subordinate to the Ministry and coordinates their plan projects with other ministries. This Area is responsible for control of important large-scale construction projects, priority construction projects in the fields of industry and engineering, special projects in the field of housing and social structures (stadiums, hospitals, and the like), and special projects of more than Bezirk-level importance. (d) The Area for the Construction Materials Industry is responsible for the planning and production of the construction materials enterprises subordinate to the Ministry and for the direction of the construction materials departments of the Bezirke. This Area directs the Institutes for Cement and Construction Ceramics and the Central Planning and Design Offices of the construction materials industry. 22/

2. Leading Personalities.

Key officials of the Ministry for Construction appear to be chosen more for their political affiliation than for their technical competence. All top key officials in the Ministry for Construction are members of the SED.

Key officials of the Ministry for Construction are listed below. 23/

Organization and Position	Official
Minister of Construction	Winkler, Heinz
State Secretary and First Deputy Minister of the Area for Technology and Drafting	Kosel, Gerhard
Chief, Main Department for Technology	Lux, Alfred

Organization and Position	Official
Chief, Main Department for City Building and Drafting	Pisternick, Walter
State Secretary of the Area for Central Departments	Hafrang, Josef
Chief, Personnel Department	Salchse, Alfred
Chief, Department of Trade Schools and Institutions of Higher Learning	Gruenberg, Hans
Second Deputy Minister of the Area for the Construction Industry	Herrmann, Rudi
Chief, Main Department for the Construction Industry	Haubert, Fritz
Chief, Main Department for Priority Construction	Siewers, Robert
Chief, Main Department for Special Construction Enterprises	Bubl, Anton
Third Deputy Minister of the Area for the Construction Materials Industry	Wolf, Joachim
Chief, Main Department for the Construction Materials Industry	Kinze, Hans-Heinrich
Chief, Main Administration for Mortars and Construction Elements	Fischer, Kurt
Soviet Adviser to the Minister for Construction	Barsunof, V.A.

C. Construction Industry.

1. General.

The construction industry is composed of centrally and locally controlled, nationalized construction enterprises (Volkseigene Betriebe -- VEB's), Workers' Housing Cooperatives, and the Private Construction Economy. Construction enterprises are designated as follows: (a) centrally controlled VEB's, directly subordinate to

the ministries (see 2, below); (b) locally controlled VEB's, directly subordinate to the councils of the Bezirke and Kreise* (see 3, p. 10, below); (c) Workers' Housing Cooperatives (see 4, p. 10, below); and (d) Private Construction Economy (see 5, p. 11, below). 24/

2. Centrally Controlled Nationalized Enterprises.

Until 1954 the Ministry for Construction exercised direct control over about 35 VEB construction unions. 25/ Early in 1954 the construction industry was reorganized in a move toward more control by local authorities. Ten specialized construction enterprises now operate under the direct supervision of the Area for the Construction Industry of the Ministry for Construction.** 26/

In addition, the Ministry for Construction maintains 17 Designing Offices and 17 Special Construction Bureaus (see D, p. 11, below) in cities throughout the country. Twenty-nine nationalized enterprises producing construction materials are directly subordinate to the Ministry for Construction. 27/

Each of the other ministries with responsibility for construction has direct control of nationalized construction enterprises that operate exclusively in its area of responsibility. For example, the VEB Construction Union South and the VEB Construction Union Coast engage exclusively in military construction for the Ministry of the Interior. 28/ New construction of railroads, bridges, and roads and maintenance of existing installations are performed by construction enterprises subordinate to the Ministry for Transport. All furnace and industrial smokestack construction enterprises are subordinate to the Ministry for Heavy Industry, 29/ with the exception of VEB Special Construction Magdeburg of the Ministry for Construction. The Ministry for Heavy Industry also controls six nationalized enterprises producing fireproof construction materials. 30/

* A Kreis is an administrative subdivision of a Bezirk, roughly equivalent to a county.

** For a detailed list of construction enterprises subordinate to the Ministry for Construction, with locations and functions, see Appendix A.

3. Locally Controlled Nationalized Enterprises.

Under the reorganization of early 1954, VEB Construction Unions subordinate to the Bezirk councils were created in each of the 14 Bezirke in East Germany. In July 1954 the 15th Bezirk Construction Union (Bezirk Bau Union -- BBU) was formed by splitting the Construction Union for Frankfurt an der Oder. 31/ Although nominally subordinate to the Bezirk councils, the BBU's are subject to supervision and control by the Ministry for Construction through the construction departments of the councils. The BBU's are utilized for housing, social, and industrial construction for their respective Bezirke, for industrial construction of more than Bezirk-level importance, and for special projects for plan recipients in the fields of housing and social construction. 32/ Because the known construction enterprises directly controlled by the ministries specialize in technical aspects of construction, it appears probable that the BBU's provide most of the structures for projects of all economic ministries having construction plans. The BBU's may also be assigned to military projects of the Ministry of the Interior.

In accordance with plans outlined in the reorganization early in 1954, the organization of relatively small Kreis-administered Construction Unions proceeded rapidly. By January 1955 there were almost 300 such enterprises employing from 25 to 30 percent of all construction labor. Kreis Construction Unions are directly subordinate to the Kreis councils and through them to the Bezirk councils and the Ministry for Construction. 33/ Apparently these enterprises engage only in construction of purely local projects within the framework of the Bezirk construction plans.

4. Workers' Housing Cooperatives.

At the end of 1954 there were 244 registered Workers' Housing Construction Cooperatives in East Germany with about 15,000 members among workers at nationalized enterprises in their respective areas. Housing projects for workers of the enterprises are constructed by regular construction enterprises, with voluntary labor contributed by cooperative members. Investment funds for the projects are provided in the state budget on the basis of reports submitted by the cooperatives, apparently either to the Ministry for Finance or directly to the State Planning Commission. 34/ It is not known whether construction by the cooperatives is financed directly or included in the construction plans of other responsible agents.

5. Private Construction Economy.

The private construction economy consists primarily of small construction craft enterprises which work under contract to responsible central and local authorities. In comparison with the nationalized enterprises, the private construction economy does qualitatively better work, at a cost of about 20 percent less. 35/ The percentages of total construction performed by the nationalized and private sectors of the construction economy during 1950-55 are given in Table 3.

Table 3

Construction in East Germany, by Nationalized Sector and by Private Sector a/
1950-55

Percent

Sector	1950	1951	1952	1953	1954	1955
Nationalized	37.2	54.8	56.5	58.5	N.A.	76 b/
Private	62.8	45.2	43.5	41.5	N.A.	24 b/

a. The percentages are derived from source 36/ except for those for 1955.
b. 37/

D. Coordination of Construction Effort.

As previously noted, the over-all construction economy plan consists of the construction plans of central and local authorities to which construction enterprises are subordinate (see A, 2, p. 6, above). Plan quotas approved and issued by the State Planning Commission include plans for production, investment, transportation, and the like and directives concerning increases in labor productivity and reductions in construction costs. 38/ Initial plan quotas seldom remain intact during the course of a plan period. Such factors as failure by some sectors to meet construction requirements, changes in construction priorities, and materials and manpower problems often result in shifts

of investment funds and construction resources not only among projects of an individual plan recipient but among plan recipients as well.

The Ministry for Construction is responsible for coordinating its construction plans with those of the other ministries and for directing the Bezirk construction departments in implementing the tasks outlined in their plan quotas. 39/ Final authority on basic questions affecting the construction industry (such as research and technology, standardization and industrialization of construction, city and village planning, and technical safety measures) rests with the Ministry for Construction. 40/ Presumably, the allocation of building materials and manpower according to the construction plan directives of the State Planning Commission is the responsibility of the Ministry for Construction, since it controls most of the construction materials industry and construction manpower either directly or through the construction departments of the Bezirk councils.

Large-scale industrial construction projects involve the utilization of subordinate construction enterprises of more than one administrative division. For example, as of 30 September 1955, construction enterprises of the Ministries for Construction and Transport and one private firm were engaged in preliminary preparation for construction at the planned Schwarze-Pumpe coking combine, an important project of the Ministry for Heavy Industry. 41/ It may be expected that furnace and smokestack construction at the project will be done by special construction enterprises of the Ministry for Heavy Industry. Factory buildings probably will be constructed by one or more BBU's. Large-scale projects of this type require centralized control of such aspects of construction as project planning; preparation of construction sites; the flow of construction materials, equipment, and manpower; technical processes; and the activities of participating enterprises. Such centralized control is the responsibility of the Ministry for Construction. 42/

The Ministry for Construction maintains a Central Special Construction Bureau at Berlin, a Central Preparation Office at Potsdam, and 15 Special Construction Bureaus at cities throughout the country. 43/ Presumably the function of these special offices is to provide the required control and coordination of large construction projects and other special projects for which the Ministry is responsible.

E. Soviet Influence and Supervision.

Despite Soviet announcements to the contrary, it is probable that the economy of East Germany is still subject to strict supervision by the Soviet authorities. Economic plans probably cannot become effective until approved by the Soviet authorities. Furthermore, recent moves toward coordination of Soviet Bloc economic planning indicate a tightening, rather than a lessening, of Soviet economic control.

Soviet supervision of construction is present at all levels from the Ministry for Construction down to actual construction projects. Since September 1954 there has been a Soviet adviser to the Ministry for Construction. 44/ Soviet supervisors inspect projects such as railroad installations, bridges, airfields, and military projects which concern the military interests of the USSR. 45/ Soviet advisers at the Gross-Doelln airfield construction project recently caused considerable unrest among workers by unjustified criticisms and insistence on unrealistic work norms. 46/

It is reported that the USSR issues yearly goal requirements for the production of some basic building materials. 47/ It is possible that the building materials industry will experience in the future a tightening of Soviet control through the Council of Economic Mutual Assistance (CEMA). Cement, in particular, is a key export commodity in the current Soviet Bloc policy of economic penetration of underdeveloped areas.

IV. Volume of Construction.

A. General.

Construction responsibilities in East Germany are divided among the construction departments of several government ministries and the Bezirk councils. In the absence of aggregate figures for construction output it is difficult to present a clear picture of performance by the construction industry.

Before 1954, no figures were issued to show planned or actual output of the construction industry. For 1951-53, figures for planned capital investment afford the best available measure of construction output. After 1953, figures for the construction economy plan and reported plan fulfillment give an adequate measure of the value of

construction output. Neither planned investment nor construction economy plan figures, however, give more than a rough measure of either increases or decreases in the physical volume of construction output from year to year (plan figures are stated in prices which do not show changes in construction costs or variations in efficiency of operations). Cost estimates for construction projects are almost invariably unrealistic, with the result that the expected volume of construction is not achieved with planned allocations.

B. First Five Year Plan (1951-55).

1. General.

The First Five Year Plan had the following two basic aims: to repair wartime destruction and to create a balanced industrial economy. The core of the plan was the reconstruction and extension of certain concerns, the basic task of which was the production of capital equipment. The 24 existing concerns were heavy engineering concerns and other concerns in the electrotechnical, precision instruments, and optical industries. This plan for development of heavy engineering required the building of an adequate supply base in the metallurgical, power, and chemical industries. 48/ The First Five Year Plan provided for DME 28.6 billion for capital investment in construction and equipment, with over one-half earmarked for investment in industry. Planned capital investment by economic sector in the First Five Year Plan is given in Table 4.*

Figures in Table 4 represent gross capital investment, including state investments, investments by local authorities, credits, and enterprises' own funds. Before 1955, VEB's were required to channel most of their profits to the state, which then redistributed them as investment funds.** 49/ VEB's, however, have always maintained an amortization fund, of which 65 percent is used for investment and 35 percent for repairs. 50/ The item "enterprises' own funds" in Table 4 apparently refers to capital investment from these amortization funds. Thus it is believed that the figure of DME 28.6 billion represents planned capital investment for construction and equipment and excludes routine repairs and maintenance.

* Table 4 follows on p. 15.

** A new system, initiated in 1955, allows VEB's to retain a larger portion of profits for self-financing of planned investments and for working capital requirements.

Table 4

Planned Capital Investment in East Germany by Economic Sector a/ 1951-55

Billion DME

Economic Sector	Planned Capital Investment
Industry	15.372
Transportation	2.671
Agriculture	1.764
Trade	0.532
Education	1.423
Health	0.657
Youth	0.300
Housing	3.456
Communal facilities	0.894
Total	27.069
Enterprises' own funds	1.545
Grand total	28.614

a. 51/

Until 1953, emphasis was primarily on development in the metallurgical, machine building, and chemical industries. The "new course" policy announced in June 1953 provided for planned reductions in investments of about one-third in 1954 and 1955. 52/ There is no evidence, however, that these reductions were actually carried out. The principal effect of the "new course" was the shifting of investment funds from heavy industry to consumer goods industries, housing, agriculture, and highway construction. About DME 370 million was so diverted in 1953. 53/

2. Output.

Estimates of the value of construction output in the First Five Year Plan have been derived from announced figures for planned capital investments and fulfillment of investment plans. According to a 1952 version of the First Five Year Plan, construction (including installation) was to average 66 percent of total investment over the 5-year period, with the percentage declining from 74 percent in 1951 to 61 percent in 1955. Planned capital investment in East Germany for the First Five Year Plan by year is given in Table 5.

Table 5

Planned Capital Investment in East Germany by Year a/
1951-55

	Construction		Equipment		
Year	Value (Billion DME)	Percent of Investment	Value (Billion DME)	Percent of Investment	Total (Billion DME)
1951	3.374	74	1.183	26	4.557
1952	3.537	70	1.478	30	5.015
1953	3.429	63	2.032	37	5.461
1954	3.701	64	2.120	36	5.821
1955	3.476	61	2.244	39	5.720
Total	17.517	66	9.057	34	26.574 b/

a. 54/
b. About DME 2 billion of the total planned investment of DME 28.6 billion is not accounted for in this version of the plan. It is likely that the DME 1.545 billion of "enterprises' own funds" are not included in this version. The other DME 0.5 billion cannot be accounted for.

Planned investment figures are intended primarily as control figures. Separate economic plans are drawn for each plan year on the basis of actual (or expected) achievement for the previous year and reflect official changes in investment policy. From the

beginning of the Five Year Plan, in 1951, the investment program did not proceed as outlined in the plan. The Five Year Plan investment plans for both 1951 and 1952 were underfulfilled, 55/ forcing an upward revision in planned investments for 1953-55. These plans were further revised when the "new course" was announced. 56/ Data on the amount of investment achieved are not available except for 1951 and 1952. Estimated actual investment and estimated value of construction for the First Five Year Plan are given in Table 6.

Table 6

Estimated Actual Investment and Estimated Value of Construction in East Germany 1951-55

Year	Estimated Actual Investment (Billion DME)	Estimated Construction	
		Billion DME	Percent of Actual Investment
1951	3.473 a/	2.570	74 b/
1952	4.549 c/	3.191	70 b/
1953	5.460 d/	3.429	63 b/
1954	5.1 to 5.2	3.9	75 to 76
1955	6.0 to 6.1	4.15	68 to 69
Total	24.5 to 24.8	17.2	69 to 70

a. 57/
b. Presented in the First Five Year Plan. 58/
c. 59/
d. 60/

Actual investment in 1951 and 1952 of DME 3.473 billion and DME 4.549 billion, respectively, represented only 76 percent and 90 percent, respectively, of planned investment for these years, as outlined in the First Five Year Plan. The original yearly economic plan for 1953 called for investment of DME 5.690 billion, 25 percent over investment for 1952. 61/ Under the "new course," planned

investment for 1953 was reduced by DME 230 million, an amount representing the backlog of unfulfilled projects from 1952. 62/ In estimating the value of construction output from actual or estimated investment for 1951-53, it was assumed that the respective planned ratios of construction to investment as given in the Five Year Plan were realized.

The total investment, planned or achieved, for 1954 is not available. State investment (representing nearly 80 percent of total investment in 1953) was to be reduced in 1954 to about DME 880 million below the figure achieved in 1953. 63/ In October 1954, however, it was announced that state investment in the first 9 months of 1954 was running DME 400 million above plan. 64/ Considering the usual fourth-quarter rush to complete the investment construction plan, it is estimated that actual investment in 1954 exceeded the planned investment by as much as DME 600 million. On the assumption that nonstate investment remained at approximately the 1953 level, total investment in 1954 is estimated at DME 5.1 billion to DME 5.2 billion. The 1955 East German budget and economic plan provided that investment in 1955 was to increase to 17 percent over that in 1954 -- to an estimated DME 6.0 billion to DME 6.1 billion. 65/

Plan figures for funds purportedly to be utilized in the construction economy plan first appeared in October 1954. The plan called for construction in the amount of DME 4.080 billion and DME 4.200 billion in 1954 and 1955, respectively. 66/ The excessive amount of unfinished construction in 1954 and construction plan fulfillment reports indicate that the plan was not fulfilled in 1954. Housing construction in particular was lagging behind plan schedules. 67/ An estimate of DME 3.9 billion for construction in 1954 is consistent with planned increases announced for 1955 and 1956 and construction economy plans for these years. On the assumption that the plan for an increase in construction in 1955 of 6.5 percent was fulfilled, 68/ the value of construction output in 1955 is estimated to have been DME 4.15 billion.

These estimates for construction in 1954 and 1955 are believed to be accurate, even though they indicate a reversal in 1954 of the planned 5-year trend toward a lower ratio of construction to investment. The excessive volume of unfinished construction in 1954 is one of the reasons for the high ratio of construction to investment. Furthermore, with greater emphasis placed on investments for

housing, agriculture, and road building in 1954 and 1955, a higher ratio was to be expected. Together with rising construction costs, these factors account for the higher proportion of investment funds utilized for construction in 1954 and 1955.

C. Second Five Year Plan (1956-60).

The Second Five Year Plan provides for state investment totaling DME 47.6 billion, plus investment of DME 7 billion from resources of socialist enterprises and from loans. 69/ During this period, greater emphasis is to be placed on modernization, mechanization, and automation to achieve increased productive capabilities, and construction will average a smaller percentage of investment than during the First Five Year Plan. 70/ Of total planned investment of DME 54.6 billion, DME 26.4 billion, or about 48 percent, is provided for the construction economy plan. 71/ By 1960, construction output is to increase to almost 150 percent of that for 1955. Figures for the construction economy plan for the Second Five Year Plan, with 1955 for comparison, are given in Table 7.

Table 7

Construction Economy Plan for East Germany a/
1955-60

Billion DME

Year	Industrial Construction b/	Housing	Special Projects	Total
1955	2.300	1.360	0.540	4.200
1956-60				
1956	2.500	1.440	0.620	4.560
1957	2.650	1.520	0.750	4.920
1958	2.800	1.640	0.840	5.280
1959	2.900	1.800	0.940	5.640
1960	3.000	2.100	0.900	6.000
1956-60 total	13.850	8.500	4.050	26.400

a. 72/
b. Industrial and other aboveground construction, including railroads, roads, and water control.

In some respects the Second Five Year Plan reflects a continuation of the "new course," started in 1953. Greater emphasis than in the preceding 5 years is placed on housing and agricultural construction. 73/ Investments for housing construction are to increase by 1960 to nearly 155 percent of the 1955 plan, compared with an increase in investment in industrial construction of about 30 percent. About half the dwellings are to be constructed in industrial regions, as was done during the First Five Year Plan. Rural housing is to account for about 35 percent of new housing construction, 74/ compared with about 25 percent in the First Five Year Plan. 75/ Substantial progress during the First Five Year Plan in restoring the most severely damaged cities makes possible a reduced emphasis on housing construction in these areas during the Second Five Year Plan. 76/

Funds are earmarked in the construction economy plan for "special projects," both civilian and military, to be carried out by the Ministry for Construction or by the construction departments of the Bezirke and Kreise. 77/ It is reported that the Ministry for Construction, on the basis of experience in 1954, expects that at least 75 percent of funds available for such projects will be used for projects of the Ministry of the Interior or the Soviet authorities. 78/

Planned investment for 1956 indicates a return to the policy that preceded the "new course," that of giving priority to development of heavy industry in preference to consumer goods industries. In 1956, investments in basic materials industries and machine building will increase over those for 1955 by 48 percent and 187 percent, respectively, compared with an increase in light and foodstuffs industries of only 5.4 percent. 79/

D. Construction in Major Economic Sectors.

1. Industry.

Emphasis on the development of heavy industry in the First Five Year Plan required an extensive construction program. Key elements of the program were the reconstruction and expansion of the machine building enterprises and the development of such supporting industries as metallurgy, solid fuels, power, and chemicals. By 1953, notable success had been achieved in expanding the industrial capacity, particularly in heavy industry. Production in basic industries (power,

mining, metallurgy, chemicals, and building materials) increased by 50 percent from 1950 to 1953. 80/ Production in the machine building and precision engineering industries increased by nearly 80 percent in the same period. 81/ By the end of 1954, industrial production had increased by 76 percent over that for 1950, compared with a planned figure of 69 percent. 82/

During the First Five Year Plan, 25 enterprises of the heavy machine building industry were reconstructed or newly constructed. 83/ As part of the program for increasing production in the metallurgical industry, 10 important iron and steel works were substantially expanded. 84/ Essentially, however, the effort to increase iron and steel output centered on the construction of two new iron and steel combines, Iron Combine East at Fuerstenberg, on the Oder River, and Iron Works West at Calbe. 85/ The Iron Combine East was the most ambitious single industrial project of the First Five Year Plan. By 1953, output of pig iron at the combine had reached 250,000 metric tons* annually and by 1955 was to reach a rate of 500,000 tons annually, an amount greater than total pig iron production in East Germany in 1950. Crude steel output by the Iron Combine East by 1955 was to reach an annual rate of 550,000 tons, or about 18 percent of planned total output of crude steel in 1955. 86/ In conjunction with the combine, the first "Socialist City of Germany," named Stalinstadt, was built. As of March 1955 it was a city of about 14,000 inhabitants. 87/

Plan figures for 1955 and 1956 indicate a renewed emphasis on development of heavy industry after the interruption of this policy in 1953-54. 88/ The principal task of the construction industry in industrial construction in the Second Five Year Plan is further expansion of the solid fuels, power, and chemicals industries. 89/ The largest single industrial project in the Second Five Year Plan is the initiation of construction of the Schwarze-Pumpe coking combine. A total of DME 3.8 billion 90/ is to be made available for the project, which on completion will be the largest of its kind in Europe. 91/ The combine will have three complete units for processing brown coal into coke, briquettes, gas, and tar. The first unit is scheduled for operation in 1960, the second for 1962, and the third for 1964. 92/ The combine is a project of the Ministry for Heavy Industry, to which the Ministries for Construction, Transport, and Post and Telecommunications, as well as the Office for Water Economy and the Bezirke will contribute investment funds. 93/ It is proposed to build a second socialized town for the eventual 12,000 workers of the combine. 94/

* Tonnages are given in metric tons throughout this report.

2. Transportation.

Throughout the period since World War II, transportation has been one of the chief weaknesses in the economy of East Germany. The excellent prewar railroad network of East Germany was seriously disrupted by war damage to bridges, marshaling yards, and other key facilities. Soviet dismantling of trackage during 1945-47 left East Germany with a predominantly single-track system. 95/ Trackage was reduced by dismantling operations from 18,500 kilometers to about 15,000 kilometers. 96/

The policy of East Germany has been to exploit to the fullest extent the existing system without major reconstructions or renovation investments. 97/ The poor condition of the railroads requires extensive maintenance and replacement of rails. 98/ Shortages of labor and materials, together with extensive maintenance requirements, have prevented any substantial progress toward restoring the railroad network to its prewar effectiveness. 99/ Production of rails in East Germany by 1954 was less than 50,000 tons annually. 100/ The First Five Year Plan provisions for rail replacement alone, if carried out, would have required more than 200,000 tons of rail. By autumn of 1953 the plan for replacing 2,300 kilometers of rail during the First Five Year Plan had been fulfilled by only 4.9 percent. 101/ By the end of 1954, only about 1,000 kilometers of new track had been laid, 102/ bringing total trackage to about 16,000 kilometers, of which about 1,200 kilometers now is double-track line. 103/

As in the railroad network, development of the East German highway and road system failed to keep pace with general economic development in the country. 104/ The Autobahn system (about 3,200 kilometers) suffered relatively little war damage and now provides the country with good north-south and east-west connections. 105/ The system of first-class roads other than Autobahnen, however, has been erratically maintained. 106/ Because of consistent shortages of materials and manpower, funds provided for maintenance have not been fully utilized. As a result, about 75 percent of the highway system in East Germany is in very poor condition. 107/

Reconstruction of bridges over the Oder and Neisse Rivers has held priority in the construction program of the State Secretariat for Motor Traffic and Roads. 108/ About 20 to 25 percent of all funds

available for bridge construction since 1952 has been allocated to construction of the Autobahn bridge at Frankfurt an der Oder, a so-called "Friendship Project." 109/ There is little doubt that Soviet advisers have pushed bridge construction on the Oder and Neisse Rivers for military purposes. 110/

3. Housing.

Little official attention was given to the critical housing shortage in East Germany until the First Five Year Plan was adopted. By 1950, only minor progress had been made toward the reconstruction of war-damaged cities and towns. 111/ During 1951-55, dwelling units were constructed at an average rate of about 42,000 units per year. Although the population was stable or decreasing, 112/ housing in 1955 was second only to food as a critical shortage in East Germany. 113/

The First Five Year Plan goal for the construction of 10.1 million square meters of housing (an average of about 2 million square meters per year) was fulfilled by only about 90 percent. 114/ Only in the first 2 plan years was the First Five Year Plan goal for housing construction achieved. Figures for housing construction during the First Five Year Plan are given in Table 8.

Table 8

Construction of Housing in East Germany a/
1951-55

Million Square Meters			
1951-52	1953	1954	1955
4.1	1.6	1.8	1.6 b/

a. 115/
b. Estimated from reported actual construction in 1951-54 and from reported First Five Year Plan achievement of 9.1 million square meters.

Plan goals were not reached in the last 3 years of the plan, despite substantial increases in the amount of investment funds allocated to housing construction. 116/ The poor performance of the construction industry in housing construction in these years clearly showed a failure to plan realistically on the basis of available construction resources. Interruptions in construction activity were caused by shortages of materials and manpower. These interruptions, together with inefficiency in operations at project sites, led to higher costs than envisioned in the economic plans. As a result, planned construction was not accomplished with allocated investment funds. For example, in 1954 the plan for housing construction was fulfilled by only 86 percent, but 95 percent of investment funds available for housing were used. 117/ Bad planning, the lack of standardized building parts, bad utilization of machines, and shortages of construction materials were given as reasons for this failure to fulfill the housing construction program for 1954. 118/

The Second Five Year Plan calls for the construction of 13 million square meters of housing, an increase of 43 percent over the volume of housing completed in the First Five Year Plan. 119/ Investment funds available for housing are to be 2-1/2 times greater than the amount provided in the First Five Year Plan. 120/ Successful implementation of the plan seems possible only if housing construction throughout the plan period receives a higher priority in the allocation of limited manpower and material resources.

4. Agricultural Construction.

Agricultural construction during the First Five Year Plan was concentrated on requirements, including housing, of machine tractor stations (MTS's), agricultural producer cooperatives (LPG's), and people-owned farms (VEG's). 121/ The program for agricultural construction received relatively little attention from central authorities in the coordination of planning and allocation of construction resources, 122/ with the result that plan goals were consistently underfulfilled. The poor record achieved in agricultural construction in 1951 and 1955 is indicative of performance throughout the 5-year period. By November 1951, 40 percent of projects planned for that year had been started and 10 percent had been completed. 123/ In September 1955 the yearly plan had been fulfilled by 37 percent for MTS's, 44 percent for VEG's, and 53 percent for rural housing. 124/ In both years the shortage of construction materials was cited as the primary reason for failure of the construction program. Even

available resources were utilized inefficiently because of the failure of the Ministry for Agriculture and Forestry and the Ministry for Construction to cooperate in providing adequate planning and direction for the construction program. 125/ Labor and materials were often used on such minor projects as paving yards at the VEG's, while the main tasks of the construction plan were ignored. 126/

During the Second Five Year Plan greater emphasis is to be placed on agricultural construction as part of the over-all plan for a more rapid development of agriculture. 127/ DME 3 billion in investment and credits will be made available for agricultural construction, compared with total expenditures of DME 1.88 billion during the First Five Year Plan. 128/ Better coordination in planning and direction of construction is indicated by a meeting in November 1955 of representatives of the Ministry for Construction, the Ministry for Agriculture and Forestry, and the State Planning Commission to discuss measures for overcoming the lag in agricultural construction. 129/ As part of the program to eliminate the deficit in agricultural construction, the Ministry for Construction during the Second Five Year Plan is to supply construction equipment and engineers to construction brigades organized within the MTS's and LPG's. 130/

5. Military Construction.

The military construction program is the responsibility of the Ministry of the Interior, subject to control by Soviet authorities, and in some cases, it is the direct responsibility of the Soviet authorities. There are few available data on which to base an estimate of the value of military construction during the First Five Year Plan. Reports of actual expenditures in 1952 and planned expenditures in 1953 and 1954 by the Ministry of the Interior, however, indicate that military construction probably accounted for 10 to 15 percent of total estimated construction during 1951-55. 131/ The construction economy plan for 1956-60 provides for expenditures of DME 4.050 billion for construction of "Special Projects." 132/ The Ministry for Construction expects that at least 75 percent of these funds will be spent on military projects for the Ministry of the Interior and the Soviet authorities. On this assumption, military construction during the Second Five Year Plan will amount to at least DME 3.04 billion, or about 11.5 percent, of total planned construction. The estimate of DME 3.04 billion appears consistent with the announced plan for investment, including equipment, of DME 3.7 billion for national defense during the Second Five Year Plan. 133/

Because of the limited supplies of construction materials and manpower in East Germany, the full economic impact of military construction is considerably greater than indicated by the above figures. The two construction enterprises controlled directly by the Ministry of the Interior, Construction Union South and Construction Union Coast, cannot fulfill the construction plan assignments of the Ministry. For example, the value of planned construction in 1956 by Construction Union South is only DME 80 million. 134/ On the assumption that there is a similar plan for Construction Union Coast, it is estimated that the two enterprises will account for only about one-third of planned military construction in 1956. The remainder must be carried out by construction enterprises normally engaged in civilian construction. 135/ This condition is expected to exist throughout the Second Five Year Plan. Furthermore, military construction probably rates top priority in the allocation of construction materials. Any planned increases in military construction occasioned by changes in defense policy can be accomplished only by additional limitations on construction resources available to the civilian economy.

V. Major Inputs of the Construction Industry.

A. Manpower.

Manpower needs of the German armed forces during World War II caused a heavy drain on the construction labor force. No prewar figure for construction manpower in what is now designated East Germany is available for comparison with postwar manpower figures. The decline during the war in the number of construction workers in all of Germany, however, probably is indicative of experience in East Germany. Total employment in construction in prewar Germany declined about 55 percent from May 1939 to November 1944, from 2,530,000 to 1,130,000 workers. Of these remaining workers a disproportionately large number were foreign nationals and prisoners of war. 136/

In East Germany, employment in "building and associated industries," probably including the construction materials industry, was about 390,000 workers at the end of 1946 and increased to about 430,000 workers by the end of 1947. 137/ By 1949, employment in the construction industry alone had reached a figure of about 406,000 workers. Figures showing the growth in employment in construction in 1949-54 are given in Table 9.*

* Table 9 follows on p. 27.

Table 9

Employment in Construction in East Germany
1949-54

Year	Number of Employed Workers
1949	405,721 a/
1950	420,526 a/
1951	488,184 b/
1952	N.A.
January-June 1953	491,337 c/
July-December 1953	468,532 d/
1954	500,000 e/

a. Plan figure. 138/
b. 139/
c. 140/
d. 141/
e. 142/

The shift in economic emphasis resulting from the "new course" probably accounted for most of the decline in the number of construction workers in the last half of 1953. A contributing factor, however, may have been the desertion from construction enterprises by construction workers, who as a group are among the most vocal in East Germany in expressing their discontent with their own conditions and with policies of the regime: the riots of June 1953 began among construction workers at the Stalin Avenue construction project in East Berlin. 143/

A shortage of construction labor prevailed throughout the period of the First Five Year Plan. As indicated in Table 9, the construction labor force increased by only about 12,000 workers, or 2.5 percent, in 1951-54, an increase insufficient to meet the growing needs of the construction industry. Efforts to enlarge the construction labor force were hampered by the rapid turnover of construction workers, particularly skilled and semiskilled workers, because of poor housing and working

conditions and relatively low wages compared with industrial occupations. 144/ At the end of 1955 the demand for skilled and semiskilled workers in the construction industry was more urgent than in any other sector of the economy. 145/

Continuous efforts during the First Five Year Plan to increase labor productivity in the construction industry have apparently met with little success. It is reported that productivity actually declined in each year during 1952-54. 146/ The basic causes of low labor productivity in the industry are the inadequate supply and poor quality of construction equipment and materials. Rather than correct the basic cause, however, the authorities have attempted to increase productivity by the application of Stakhanovite methods. Such measures as establishing unrealistic norms, arbitrarily increasing existing norms, and applying continuous pressure on workers have caused general dissatisfaction among construction workers and have adversely affected worker productivity. 147/

The utilization of large numbers of older workers and women as construction workers further limits the over-all efficiency of construction labor. About 26 percent of all construction workers in June 1953 were over 50 years of age, and about 23 percent were between the ages of 40 and 50 years. In the same period, about 11 percent of the construction labor force was made up of women, used mainly as unskilled labor. 148/

B. Materials.

In almost every instance of failure to fulfill construction plans, a shortage of building materials has been cited as the major cause of the failure. The persistent shortage of construction materials in the First Five Year Plan can be attributed mainly to neglect of the industry by the regime. Producers of construction materials were hampered in meeting plan goals by the low productivity of obsolete equipment and by numerous changes in plan quotas and investment policies for the industry. 149/ Adequate investment funds were not provided either for the replacement of obsolete equipment or for the expansion of capacity necessary to meet the growing needs of the construction industry. At the end of 1954, production of most major construction materials -- including cement, bricks, roofing tiles, fireproof materials, and lumber -- was lagging behind plan. 150/

The most serious bottleneck in the construction industry has been the cement industry, which was among the hardest hit by Soviet dismantling and reparations demands. At the beginning of the First Five Year Plan, cement production had recovered to only about 55 percent of the 1938 level of production. The First Five Year Plan called for approximately a threefold increase in cement production, from about 1.4 million tons in 1950 to 4.0 million tons in 1955. In 1953, however, production reached only 2.4 million tons, forcing a downward revision of planned production for 1954-55. 151/ Figures for the production of cement in East Germany in 1938 and 1948-55 are given in Table 10.

Table 10

Production of Cement in East Germany
1938 and 1948-55

Thousand Metric Tons

Year	Production
1938	2,500 a/
1948	918 b/
1949	1,154 b/
1950	1,389 b/
1951	1,630 b/
1952	1,988 b/
1953	2,405 b/
1954	2,597 b/
1955	2,800 c/

a. 152/
b. 153/
c. Estimate based on an announcement that the plan was overfulfilled by 100,000 metric tons. 154/

Despite a 100-percent increase in cement production from 1950 to 1955, there has been no substantial increase in supplies available for domestic use. Shortages of cement have been aggravated by the increasing use of cement as a key trade commodity for obtaining needed raw materials from the USSR. 155/ Since 1953, exports have absorbed the entire increase in cement production. Figures for the production and export of cement during 1951-55 are given in Table 11.

Table 11

Production and Export of Cement in East Germany
1951-55

Thousand Metric Tons

Year	Production	Export	Available for Domestic Use
1951	1,630	N.A.	N.A.
1952	1,988	566 a/	1,422
1953	2,405	450 b/	1,955
1954	2,597	680 c/	1,917
1955	2,800	1,000 d/	1,800

a. 156/
b. 157/
c. Plan figure. 158/
d. Plan figure. 159/

Export figures for 1954-55 are plan figures. In the first 2 quarters of 1954 the export plan was fulfilled by about 45 percent. 160/ If this percentage of fulfillment held for the entire year, the underfulfillment of about 80,000 tons would have brought the amount available for domestic use in 1954 only up to the 1953 level. Data on the fulfillment of the 1955 export plan are not available. There is little possibility of any reduction in export commitments to alleviate the domestic supply situation. With cement a key export commodity in the current Soviet Bloc policy of economic penetration of underdeveloped areas, exports may be expected to increase over the 1955 level during the Second Five Year Plan.

The quality of cement produced in East Germany is generally poor. Most cement produced is Portland "225" -- that is, a cement with compressive strength of 225 kilograms per square meter. 161/ Since a higher quality of cement is required for export, it is probable that most, if not all, of the Portland "325" and "425" cement produced in East Germany is used to cover export commitments.

Expansion of capacity in the cement industry has been severely limited by the export of cement factory installations produced by the East German machine building industry. From 1947 to March 1955, East Germany delivered to the USSR 24 complete cement factory installations, partly as reparations and partly on export account. Some of these factories have a capacity of 1,000 tons each per day; and the others a capacity of 900 tons each per day. Five more factories, with a capacity of 1,200 tons each per day, are to be delivered by 1958. 162/ During 1954 and 1955, 2 complete cement factories, with a capacity of 1,000 tons each per day, were delivered to Communist China. 163/ A third factory, with a possible capacity of 1,000 tons per day, is to be delivered to Communist China. 164/ In 1954-55, negotiations were under way for the delivery to Czechoslovakia and Bulgaria of complete cement factories, with a capacity of 1,000 tons each per day. 165/

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It has been estimated that cement production must reach 4.6 million tons per year by 1960 to fulfill the quotas of the Second Five Year Plan. 167/ Indications are that in the future more attention will be given by the authorities to the requirements of the construction materials industry than during the First Five Year Plan. Investment for the industry was increased in 1955 by 137 percent over investment for 1954, largely to raise the output of cement. 168/ Present plans call for the construction of two cement factories in 1956 and another in 1957. 169/ The capacity increase required to raise output to 4.6 million tons, however, will be possible only if production installations are made available for domestic expansion. Thus the success of the program will depend on the extent to which produced cement installations are earmarked for export in support of the current Soviet policy.

C. Equipment.

In the past, Germany was noted for its production of excellent equipment of all types, both for internal use and for export. After World War II, German stocks of excavation and erection machinery, bulldozers, trucks, and other construction equipment were seriously depleted by Soviet confiscation. As previously noted, Soviet dismantling had reduced the stock of equipment in the building industry in 1946 to about 60 to 65 percent of the 1936 level. Beginning in 1949, all available construction equipment was concentrated under a centralized authority which rented equipment to the various construction firms. 170/ Late in 1952 or early in 1953 an organizational change placed equipment pools under regional nationalized firms. 171/ In addition, individual construction enterprises, particularly centrally directed ones and BBU's, probably maintain small construction equipment pools.

Existing equipment is generally old and in poor condition, thus contributing to low productivity by workers on construction projects. 172/ Through 1955 there was little progress toward industrializing construction by replacing manual labor and old craft methods with machines. 173/ Stocks of construction machines and equipment will have to be increased substantially to support the program of industrialization of construction outlined in the Second Five Year Plan. The Ministry for Construction will be responsible for outlining the tasks of the machine building industry in the production of construction machinery and equipment. 174/

VI. Evaluation of the Construction Industry.

A. Past Performance.

The construction industry during the First Five Year Plan was characterized by inefficient operations and rising construction costs. As a result, the planned physical volume of construction was not accomplished with allocated investment funds. Little progress was made in raising worker productivity, a factor of major concern to authorities in the construction industry. During 1950-54 the increase in worker productivity probably was no more than 20 percent, compared with an increase in wages of 38 percent. 175/ The poor condition of existing construction equipment, the poor housing and working conditions, and the workers' resentment of Stakhanovite methods of work all contributed to low productivity by the workers. The uneven flow of building materials

to construction sites often resulted in workers' remaining idle while awaiting shipments of materials. Furthermore, considerable losses of materials were incurred by improper transportation and storage and by faulty organization at construction sites. 176/

Much of the difficulty experienced by the construction industry can be attributed to poor planning and organization of construction at both the ministerial and the local levels. The goals set for the construction industry were hardly possible of achievement in view of the short supply of manpower, materials, and equipment. Projects were planned and construction initiated with little regard to the possibility of supplying the construction resources necessary for continuous operation. Such unrealistic plans forced numerous changes in plan quotas and shifts in investment funds, and these changes caused confusion and reduced efficiency at the operational level. 177/ There was also a noticeable lack of coordination of plans at the ministerial level. For example, the Construction Union South, working exclusively on military projects of high priority, was unable to obtain sufficient quantities of building materials to complete its 1955 plan because of the low priority assigned by the Ministry for Transport to shipments of these materials. 178/

There is evidence that many of the defects in the planning and organization of construction may be eliminated in the future. The reorganization of the construction industry in 1954 gave wider authority to the Ministry for Construction in planning the construction program and coordinating construction efforts of the various authorities responsible for construction activity.

Toward the end of the First Five Year Plan, East Germany began to lay the foundation for the industrialization of construction along standardized lines. In 1954 the Area for Technology and Drafting of the Ministry for Construction began extensive activity in the development of standardized building components. In 1955, production of prefabricated concrete parts was to be increased by 52 percent over that in 1954. 179/ Production of hollow bricks was to be increased by 52 percent, including a tenfold increase in production of large hollow bricks. 180/ These increases will be small in absolute terms, but they indicate a trend toward more modern construction techniques. The use of large building blocks, put into place by crane, has so far been applied successfully at small housing projects in the Berlin area.

The new socialist city to be built at the Schwarze-Pumpe coking combine is to be the first large-scale project in East Germany to employ industrialized methods of construction. A 1,000-unit housing project is to be built of precast components assembled with the use of cranes. 181/ According to present plans, by 1960, 90 percent of all residential and agricultural construction will consist of standard projects constructed by industrial methods. 182/

B. Prospects in the Second Five Year Plan.

According to the Second Five Year Plan, the volume of construction is to be 40 percent higher in 1960 than in 1955, 183/ an ambitious goal in view of existing shortages of construction materials and manpower. The plan calls for decisive measures to correct these deficiencies and to promote the industrialization of construction.

Success of the materials program will depend largely on the extent to which supplies of cement available for domestic use can be increased. As previously noted, there is little likelihood that more cement will become available through reduced exports. The necessary increase in supplies of cement can be achieved only by increasing domestic productive capacity.

On the assumption that adequate supplies of materials are available, it can be concluded that the fulfillment of the construction plan will depend largely on the success of the program for industrializing construction methods. There is little possibility that the size of the construction labor force can be substantially increased except perhaps by the addition of women workers. Neither can worker productivity be substantially increased by raising work norms. The labor shortage will be overcome only as labor productivity is increased by the industrialization of construction. The Ministry for Construction has been directed to negotiate with the machine building industry for production of construction equipment and machinery necessary to support the policy of industrialization.

It is doubtful, however, that adequate supplies of construction equipment and production facilities for cement factories can be made available to the domestic economy. East Germany will continue to be dependent on foreign supplies of industrial raw materials, particularly iron ore and metallurgical coke, and must export machinery and equipment,

along with other manufactures, to obtain these materials. In the past, cement factories and construction equipment have been key export items. Furthermore, the export of cement factories figures prominently in the current Soviet policy of economic penetration of underdeveloped areas. Thus the extent to which East Germany must export these items, either to follow Soviet direction or to obtain needed raw materials, will be a decisive factor in the success of the construction plan during the Second Five Year Plan.

APPENDIX A

CENTRALLY CONTROLLED ORGANIZATIONS OF THE MINISTRY FOR CONSTRUCTION IN EAST GERMANY

Name	Remarks
Special Construction Enterprises	
VEB Special Construction Magdeburg	Construction of wells, heating plants, industrial furnaces, and chimneys.
VEB Dam Construction and Water Power Installations	
VEB Engineering and Underground Construction	Subsurface engineering, excavations, and construction of airfields.
VEB Construction Union for Coal	Construction of technical installations in the coal industry, including power plants, briquette factories, and coal gas installations.
VEB Excavation and Conveying	
VEB Installation and Salvage	Salvage, assembly, and installation of equipment.
VEB Construction Machinery Enterprise	Central construction machinery pool.
VEB Construction Mechanics	
Central Office Spare Parts and Accessories for Construction Machinery	
Central Preparations Office	
Central Special Construction Bureau	Presumably the function of these bureaus is to plan and coordinate the work of participating ministries and Bezirke in special, large-scale projects and in projects of greater importance than Bezirk projects.
Special Construction Bureaus	
Construction Materials Production Enterprises	
VEB Lime, Cement, and Concrete Plant	
VEB for Foundry Cement Plant East	Blast furnace (slag) cement plant.
VEB Lime and Cement Plant	Lime and cement works.

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* There is 1 Special Construction Bureau at Potsdam and 2 in the Potsdam-Rehbruecke area.

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Name	Remarks
VEB Cement Plants	
VEB Centrifugal Concrete Pipe Plant	
VEB Concrete Plant	
VEB Concrete and Gravel Plant	
VEB Centrifugal Concrete Pipe Plant	
VEB Construction Materials Plant	
VEB Gypsum Plant	
VEB Brick Plant	
VEB Limestone and Sandstone Plant	
VEB Brick Plant	
VEB Roofing Tile and Cinder Sheet Plant	
VEB Floor Tile Plant Kurt Buerger	
VEB Sheet Plant	Plate (sheet) plant, possibly for lightweight concrete plate.
VEB Chalk Plant Ruegen	
VEB Limestone Plant	
VEB Saxon Granite Plant	
VEB Quartz-Porphyry Plant	
VEB United Hardstone Plant	

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